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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 09/686,120   | 10/11/2000  | Gilbert Ho Yin Tsang | SNY-P3965             | 4933             |
| 24337  | 7590        | 05/03/2006           | EXAMINER              |                  |
| MILLER PATENT SERVICES<br>2500 DOCKERY LANE<br>RALEIGH, NC 27606 |             |                      | SALTARELLI, DOMINIC D |                  |
|  |             |                      | ART UNIT              | PAPER NUMBER     |
|  |             |                      | 2623                  |                  |

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/686,120

Applicant(s)

TSANG ET AL.

Examiner

Dominic D. Saltarelli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 38-57 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-37 and 58-91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 10-24, filed March 10, 2006, with respect to the rejections of claims 1-37 and 58-91 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection is made in view of Hofmann (5,809,076) and Whitehead et al. (6,085,030) [Whitehead].
2. Additionally, numerous official notices and other stand alone facts have been presented over the prosecution history, and in the interest of simplifying the presentation of rejections set forth herein with respect to the official notices and other well known facts presented previously, the following list provides a reference for claimed features and the corresponding prior art references which have been introduced to provide factual support.

First, regarding the use of authentication codes to verify the origin of a packet, as found in claims 2, 16, 18, 33, 34, 59, 67, 77, and 91, is supported by Blumenau et al. (US 2003/0115324 A1) [Blumenau], see paragraphs 51 and 52.

Second, regarding the use of 10 character ASCII strings, as found in claims 3, 5, 19, 21, 34, 60, 62, 68, 78, 80, and 91, is supported by Aoyagi et al. (4,751,674) [Aoyagi], see col. 5, lines 29-44.

Third, regarding the use of encryption to secure information, as found in claims 4, 6, 8, 10, 20, 22, 24, 34, 61, 63, 65, 69, 71, 79, 81, 83, 85, and 91, is supported by Blumenau, see paragraph 52.

Fourth, regarding the use of status codes indicative of the running status of a modem, as found in claims 7, 23, 34, 64, 70, 82, and 91, is supported by Koperda (5,790,806), see col. 12, lines 13-19.

Fifth, regarding the use of four byte integer codes, as found in claims 9, 25, 26, 34, 84, and 91, is supported by Bernardini (5,144,623), see col. 5, lines 13-15.

Sixth, regarding the use of a display coupled to the main circuit board to display the status of a modem, as found in claims 11, 31, 34, 86, and 91, is supported by Rahamim et al. (5,764,694) [Rahamim], see col. 4, lines 15-27.

Seventh, regarding the use of a 30 second period for broadcasting information, as found in claims 12, 27, 34, 87, and 91, is supported by DeBettencourt et al. (6,279,001) [DeBettencourt], see col. 10, lines 6-8.

Eighth, regarding the use of cable modems for interconnecting home devices to a network, as found in claims 13, 28, 35, and 88, is supported by Slezak (6,006,257), see col. 4 line 65 – col. 5 line 10.

Ninth, regarding the use of the User Datagram Protocol to send messages, as found in claims 15, 36, 72, 74, and 89, is supported by Dunn et al. (6,169,795) [Dunn], see col. 5, lines 1-22.

Lastly, regarding the use of a PCI bus, as found in claims 30, 37, 73, and 75, is supported by Caputo (5,675,831), see col. 4, lines 28-48.

***Claim Objections***

3. Claim 58 is objected to because of the following informalities: On line 4, "the modem" should be changed to --the managed component--. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-37 and 58-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann in view of Whitehead.

Regarding claims 17, 58, 66, and 90, Hofmann discloses a system (fig. 1) comprising modems (routers shown in fig 1 is shown in detail in fig. 3, wherein the router, using processor 35, is also a modem) and a main circuit board (remote control unit) interconnected to the modems [managed components] via an interconnection (as shown in fig. 1, see col. 4 line 50 – col. 5 line 9), means residing within said modems for periodically transmitting a discovery packet from said modems to the main circuit board by addressing the discovery packet to a broadcast address monitored by a programmed processor residing on said main circuit board via the interconnection, wherein the discovery packet comprises a

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network address of the modem in order to permit the main circuit board to learn the modem's address (col. 4, lines 14-39).

Hofmann fails to disclose the network address is an IP address.

In an analogous art, Whitehead teaches it is well known to utilized the TCP/IP protocol for inter-device communications over a network (col. 2, lines 52-63), wherein the TCP/IP protocol is a well known and widely accepted protocol for message transmission.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Hofmann to utilize the TCP/IP protocol, as taught by Whitehead, resulting in the use of IP addresses as the network addresses being broadcast, for the benefit of simply utilizing a common network protocol that is well known and widely accepted.

Regarding claims 18-28, 30, 31, 34, 35, 37, 59-65, 67-71, 73, 75, 77-88, and 91, the use of 10 character ASCII strings, authentication codes, encryption, status codes, 4 byte integers, a 30 second period for periodic broadcasts, cable modems, PCI buses, and displays connected to main circuit boards for displaying the status of a modem, are all known and minor technical features that have been previously addressed as being taught as desirable features in the prior art, as described above regarding the examiner's prior usage of official notice in past actions.

Therefore it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Hofmann and Whitehead to include the use of 10 character ASCII strings, authentication codes, encryption, status codes, 4 byte integers, a 30 second period for periodic broadcasts, cable modems, PCI buses, and displays connected to main circuit boards, as claimed.

Regarding claims 29, 32, and 76, the processors which control the functions of the modem and the functions of the main circuit board are separate and distinct devices (Hofmann, col. 4, lines 40-49).

Regarding claim 33, Hofmann and Whitehead disclose the system of claim 18, and further comprising a network device interconnected with the main circuit board using an interconnection (see Hofmann fig. 1, there are several routers and brouters within the network, each of which broadcasts a unique network address, col. 4, lines 14-39), and means residing within said network device for periodically transmitting a discovery packet from said network device to said main circuit board over said interconnection to a broadcast address monitored by the main circuit board (Hofmann, col. 4, lines 14-39), wherein the discovery packet comprises an IP address of the network device (since the devices are communicating via TCP/IP, as taught by Whitehead).

Hofmann and Whitehead fail to disclose the discovery packet comprises a signature, wherein the main circuit board distinguishes between the modem and the network device by the signature.

However, as stated above, the use of authentication codes is well known in the art for identifying devices.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Hofmann and Whitehead to include a signature for distinguishing between the modem and network device.

Regarding claims 36, 72, 74, and 89, Hofmann and Whitehead disclose the system of claims 34, 58, 66, and 76, wherein the discovery packet uses User Datagram Protocol (Whitehead, col. 2, lines 52-63).

#### ***Allowable Subject Matter***

6. Claims 1-16 are allowed. Claim 1 recites "In a Set-Top box configured with a modem and a Main Circuit Board", wherein the modem and the Main Circuit Board are referenced in the body of the claim, "breathing life" into the preamble's recitations of a modem and Main Circuit Board internal to a Set-Top box. The art applied in the instant office action is directed toward devices distributed over a network in such a manner that applicant's claimed invention of a system internal to a Set-Top box is patentably distinct. Subsequent independent claims do not identify the modem, network device, or managed components, and Main Circuit Board to be internal to the Set-Top box, as the



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limitation of said Set-Top box is found only in the preamble and is not given patentable weight. Applicant is advised to amend the independent claims to specify the modem, network device, managed components, and Main Circuit Board are all devices that are located inside of the claimed Set-Top box in order to place this application in condition for allowance.

### ***Conclusion***

7. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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## Certificate of Mailing

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS

  
JOHN MILLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600